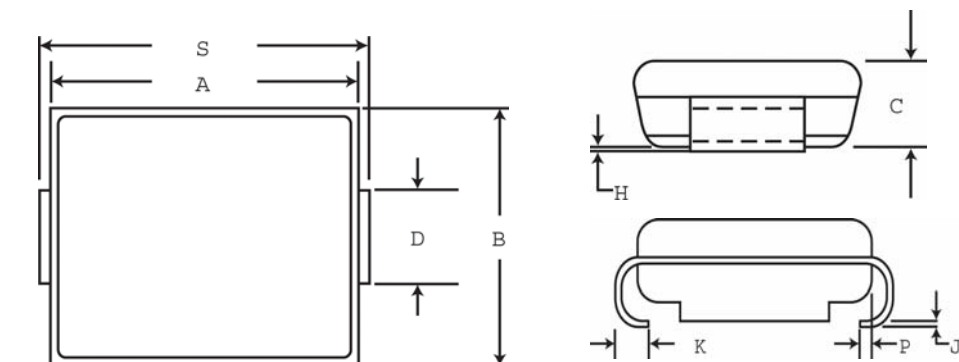


Specification Status: Released

PHYSICAL DESCRIPTION



Marking:

Diagram illustrating the date code '058A' and its components:

- The code '058A' is shown.
- The '05' is bracketed and labeled 'Date Code'.
- The '8A' is bracketed and labeled 'Device Code'.

A		B		C		D**		H		J		K	
MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
4.06	4.57	3.30	3.94	1.90	2.44	1.95	2.20	0.05	0.20	0.15	0.31	0.76	1.52
(0.160)	(0.180)	(0.130)	(0.155)	(0.075)	(0.096)	(0.077)	(0.086)	(0.002)	(0.008)	(0.006)	(0.012)	(0.030)	(0.060)

	P	S	
	REF	MIN	MAX
mm:	0.51	5.21	5.59
in*:	(0.020)	(0.205)	(0.220)

*Rounded off approximation

** D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P

Other Physical Characteristics

Form Factor:	SMB (Surface Mount, JEDEC DO-214AA Package)
Lead Material:	Matte Tin finish
Encapsulation Material:	Epoxy, meets UL94 V-0 requirements
Solderability:	per MIL-STD-750, Method 2026
Solder Heat Withstand:	per MIL-STD-750, Method 2031
Solvent Resistance:	per MIL-STD-750, Method 1022
Mechanical Shock:	per MIL-STD-750, Method 2016
Vibration:	per MIL-STD-750, Method 2056

Tape and Reel packaging per EIA 481-1

Agency Recognition: UL
Precedence: This specification takes precedence over documents referenced herein.
CAUTION: Operation beyond the rated voltage or current may result in rupture, electrical arcing or flame.

Materials Information

RoHS Compliant

ELV Compliant

**Directive 2002/95/EC
Compliant**

**Directive 2000/53/EC
Compliant**

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DEVICE RATINGS @ 25° C (Both Polarities)

OBSELETE

takes precedence over documents referenced herein.
the rated voltage or current may result in rupture, electrical arcing or flame.

NOT the LATEST

REVISION

variant

compliant

reserved.

SiBar™ Thyristor Surge Protectors

Raychem Circuit Protection Products

PRODUCT: TVB058SA-L

DOCUMENT: SCD 25052
PCN: 539912
REV LETTER: H
REV DATE: APRIL 28, 2007
PAGE NO.: 2 OF 2

Parameter	Symbol	Value	Units
Repetitive Off-State Voltage, Maximum at $I_D = 5 \mu A$	VDM	58	V
Non-Repetitive Peak Telcordia GR-1089 CORE 10x1000 μs	IPP ₁	50	A
Impulse Current TIA-968 lightning Type A Metallic 10/560 μs	IPP ₂	70	A
Double exponential TIA-968 lightning Type A Longit. 10/160 μs	IPP ₃	90	A
Waveform Telcordia GR-1089 Intrabuilding 2/10 μs	IPP ₄	150	A
(Notes 1 and 2) IEC61000-4-5 (Voc 1.2/50us) 8/20 μs	IPP ₅	150	A
ITU-T K.20/K.21 (Voc 10/700us) 5/310us	IPP ₆	80	A
TIA-968 lightning Type B (Voc 9/720us) 5/320 μs	IPP ₇	80	A
Critical Rate of Rise of On-State Current			
Power Pulse Amplifier, C=30 μF , V=600V	di/dt	500	A/ μs
Maximum 2x10 μs waveform, V _{OC} =750V, I _{SC} =150A peak	di/dt	100	A/ μs

DEVICE THERMAL RATINGS

Storage Temperature Range	TSTG	-55 to 150	°C
Operating Temperature Range	TA	-40 to 125	°C
Blocking or conducting state			
Overload Junction Temperature	TJ	+150	°C
Maximum; Conducting state only			
Maximum Lead Temperature for Soldering Purpose; for 10 seconds	TL	+260	°C

ELECTRICAL CHARACTERISTICS Both polarities (T_J @ 25°C unless otherwise noted)

Characteristics	Symbol	Min	Typ	Max	Units
Breakover Voltage (+25°C) (dv/dt = 0.4kV/ms, I _{SC} =900mA, V _{DC} = 500V (both polarities))	VBO	----	64	78	V
Breakover Voltage Temperature Coefficient	dVBO/dTJ	----	0.1	-----	%/°C
Off-State Current (VD1= 50V)	ID1	----	-----	2.0	μA
(VD2=VDM)	ID2=IDM	----	-----	5.0	μA
On-State Voltage (IT=1A) PW ≤ 300 μs , Duty Cycle ≤ 2% (Note 2)	VT	----	-----	4.0	V
Breakover Current	IBO	----	-----	800	mA
Holding Current (Note 2)	IH	150	----	-----	mA
Peak Onstage Surge Current (Measured @ 60Hz, 1 cycle, 600V)	ITSM	22	----	-----	A
Critical Rate of Rise of Off-State Voltage (Linear waveform, VD = 0.8 X Rated VBO, TJ= +25°C)	dv/dt	2000	----	-----	V/ μs
Capacitance (f=1.0 Mhz, 50Vdc bias, 1Vrms)	C1	----	43	-----	pF
(f=1.0 Mhz, 2Vdc bias, 1Vrms)	C2	----	80	-----	pF

Note 1. Allow cooling before testing second polarity

Note 2. Measured under pulse conditions to reduce heating

VOLTAGE-CURRENT CHARACTERISTIC

